

A REVISION OF THE GENUS *PEDIANA* SIMON (HETEROPODIDAE: ARANEAE) IN AUSTRALIA

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Australian species of the genus *Pediana* Simon, 1880; *P. horni* (Hogg, 1896), *P. occidentalis* Hogg, 1903, *P. regina* (L. Koch, 1875), type species, and *P. tenuis* Hogg, 1903 are revised. Males of those species are described for the first time. Specimens which Thorell, 1881 attributed to *Polydamna* (= *Pediana*) *regina*, are not that species. Two groups are recognised.

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The genus *Pediana* has received very little attention in literature apart from the original descriptions of the species. L. Koch (1875) described the first species as *Heteropoda regina* from Queensland. Both Thorell and Simon proposed a new genus for this species. Simon (1880) with *Pediana*, preceded Thorell (1881) who proposed the name *Polydamna* when describing specimens he considered to be *regina* from Yule Is. (the table on p. 698 gives '*Polydora regina*'). Hogg (1896) described *Isopeda horni* from South Australia, which he transferred to *Pediana* in 1903, at the same time describing two new species, *P. occidentalis* and *P. tenuis* from Western Australia.

All were originally described from females, males being unknown in literature except for Thorell's description of the male of *Polydamna regina*. Examination of that male shows that it is not *regina* but a possible new species which requires comparison with *P. aurichelis* Strand, 1907 from Java, the last species added to the genus. Types of the latter are lost (Renner, Stadtliches Museum für Naturkunde, pers. comm.) and the species is not considered here. The male palp of Thorell's specimen is illustrated and the species briefly discussed.

Pediana has remained an obscure genus judging by literature records and Museum collections. Simon (1908) redescribed a specimen correctly attributed to *P. tenuis*, while Strand (1913) gave a description of *P. horni* under the name of *P. regina* (var.?) [neither of those specimens have been examined]. Specimens of *P. tenuis* from Everard Ranges (in the South Australian Museum), were mis-identified as *Isopeda leishmanni* by Rainbow (1915). Many specimens deposited in Museums have been identified as *Isopeda* species, particularly *P. horni* and *P. tenuis*, in which the larger size and similar genitalia shape can be confusing. In the only other discussion of *Pediana*, Mascord (1970) gave brief notes on the genus giving some habitat preferences.

MATERIALS AND METHODS

These notes supplement those given by Hirst (1989). Spination and colour common to all species are given under 'Remarks'. Colour in alcohol is given from recently preserved material. Eye measurements, given as relative to the diameter of an AME, are made on a horizontal plane, except PLE which are on the lateral declivity and measured on a vertical plane. Larger body and leg measurements are taken to the nearest 0.1 mm as most segments required more than one measure using an eyepiece graticule. This problem was compounded by the difficulty in positioning segments of brittle specimens perfectly horizontal for the required accuracy. Abbreviations are: AL = abdomen length, AW = abdomen width, CL = carapace length, CW = carapace width, L = length, W = width. Other abbreviations standard for Araneae. Acronyms: AM — Australian Museum, Sydney; BMNH — British Museum (Natural History), London; BYM — Dr B.Y. Main, Zoology Department, University of Western Australia, Perth; MCG — Museo Civico di Storia Natural 'Giacomo Doria', Genoa; MUZ — Museum Zoologiczne Wroclawskiego, Wroclaw; NMV — Museum of Victoria, Melbourne; NTM — Northern Territory Museum, Darwin; QM — Queensland Museum, Brisbane; SAMA — South Australian Museum, Adelaide; SMNS — Stadtliches Museum für Naturkunde, Stuttgart; WAM — Western Australian Museum, Perth; ZMH — Zoologisches Museum, Hamburg.

Pediana Simon

Pediana Simon, 1880: 258. Type species: *Heteropoda regina* L. Koch 1875, by original designation and monotypy.

Polydamna Thorell, 1881: 299. Type species: *Polydamna regina* by original designation and monotypy. ♂, Penultimate ♀, Yule Island, MCG, examined.

Heteropoda [part] Koch, 1875: 716.

Isopeda [part] Hogg, 1896: 340.

Diagnosis

Carapace about three to four times longer than high. Lateral eyes raised on low common mound. Anterior row recurved, posterior row procurved. MOQ longer than wide. Anterior legs of equal length or leg I subequal to leg II. Abdomen elongate, pointed posteriorly, up to twice as long as wide. Male palp with embolus coiled $2\frac{1}{2}$ –5 times, coil slack wide and of low profile. Palpal tibia with large retrolateral distal apophysis having a dorsal basal ridge.

Description

Medium to large spiders. Two groups are recognised. One contains *P. regina*, *P. occidentalis* and Thorell's species (*regina* group), the other, *P. horni* and *P. tenuis* (*horni* group). Carapace length 3–9 mm (*regina* group) or 6–12 mm (*horni* group), longer than wide, highest posterior to ocular region. ALE largest. PME dome shaped, clearly visible in lateral view. Clypeus $\frac{1}{2}$ to $\frac{3}{4}$ width of AME. Cheliceral groove with two promarginal teeth, three or four retromarginal teeth, rarely five. Labium barely wider than long, with rounded apex. Sternum longer than wide, truncate anteriorly, narrowing from second coxae to a short point posteriorly. Three pairs of ventral spines on tibiae of the *horni* group with distal pair adjacent to articulation with metatarsi. Distal spine pair often absent in the *regina* group. Juveniles of both groups lack the distal pair. Patella IV equal in length to patella III, both may be without retrolateral spines. Scopula on metatarsi IV largely replaced by long bristles. Abdomen up to twice as long as wide (except in gravid females), pointed posteriorly, with pattern of black spots comprised of short adpressed setae which point posteriorly and inwards towards centre line of each spot. Ventrally with two black patches, one posterior to epigastric furrow, the other anterior to spinnerets. The latter patch may be faint or occasionally absent. Male tibial apophysis equal in length to palpal tibia with basal dorsal ridge, pointed apically. Embolus coiled in distal half of cymbium $2\frac{1}{2}$ (*regina* group) or 5 times (*horni* group) with the terminal portion of the embolus resting in groove of a modified loosely spiralled conductor. Coil slack broad at first, then of decreasing width, profile low. Female epigynum large, oblong with somewhat parallel sides to broadly triangular. Fossa large, whitish, slightly translucent often allowing the spermathecae or spermathecal sacs to be seen beneath, slightly concave, smooth except posteriorly, laterally overhung by broad sclerotised lateral rim. Fossa and sclerotised rim lacking setae. Vulva paired,

insemination ducts coiled two to three times (*regina* group) or 5 to 6 times (*horni* group) around spermathecae leading back to adjacent anterior margin of fossa with gentle arc (*horni* group) or with large spermathecal sacs extending to median ventral position (*regina* group) before looping back anterior to fossa, continuing as fertilisation ducts under lateral rims to posterior margin.

Remarks

Mascord (1970) stated *Pediana* was rather shorter in the legs than most huntsman spiders, but this is a visual interpretation affected by the relatively longer abdomen and anterior legs being of equal length. Leg I ratio (leg length divided by carapace length) is comparable with that of many other Australian huntsman spiders particularly *Neosparassus* and some species presently in *Isopeda*. However, leg II of females is relatively shorter than in most other Australian Heteropodidae.

In his key to species included in *Pediana*, Hogg (1903) stated there were no dorsal spines on the posterior tibiae of *P. horni*. This contradicts his original description of one spine on each, which the syntype and other material examined possesses. Tibiae of all species usually with one dorsal spine but *horni* group most often with two on anterior pairs. Thorell's species, while placed here in the *regina* group, has a similar spination to the *horni* group. Usual spination of the *horni* group is as follows: palps, fe d3 pl r1 (all distal), pa pl r1, ti d1 p3 r2 (male r1), ta p3 r variable between 1–3 (male p0 r0); leg I and II, fe d2 p3 r3, pa pl r1, ti d2 p2 r2 v6, me p2 r2 v4; leg III, fe d2 p3 r3, pa pl r1, ti d1 p2 r2 v6, me p2 r2 v4; leg IV, fe d2 p3 r1, pa pl, ti d1 p2 r2 v6, me p4 r4 v4.

The *regina* group as stated above, differs in having one dorsal spine on anterior tibiae (again with the exception of Thorell's species) and often only two spine pairs ventrally on tibiae, lacking the extreme distal pair. This may be represented as a stout bristle, particularly in males, or as a pro-ventral spine on anterior tibiae. Retrolateral patellae spines are usually absent on leg III as well as IV.

Coloration of *Pediana* species is similar. Colour photographs of *P. regina* (in life) can be found in Mascord (1970: 39, Figs 55, 56). Colour in alcohol is paler, of reddish and yellow-brown hues suffused with black. Carapace is reddish-brown, caput darker. Dense adpressed, yellow, orange or whitish setae, interspersed with black. Clumps of black setae often form spots along sides. A thick line of black setae just above postero-lateral margin runs slightly into posterior edge. Black setae around fovea occasionally extend in a line towards caput. Chelicerae reddish, basal half with adpressed white and orange setae. Distal half with erect long setae only. Maxillae and labium blackish, pale anterior

margins. Sternum yellowish to dark brown, margins paler. Legs red-brown proximally to tibia then dark brown or blackish distally to tarsi. Setae similar to carapace, femora ventrally spotted with clumps of white or orange-red setae. Abdomen dorsally yellow-brown to olive-grey with setae as on carapace. Median stripe of black setae usually faint, occasionally vivid. Ventrally yellowish to orange with black spots. Two large black patches, one behind epigastric furrow, the other anterior to spinnerets. Sclerotised area around fossa often bright orange-red.

The tegulum of the unexpanded male palp is largely covered by a disc-shaped embolar base (Fig. 1) where a sclerotised plate, which may be part of the median apophysis, is incorporated. The embolar base in the *regina* group is ridged prolaterally on the distal margin with an indented area proximally to this. A small median apophysis is adjacent to the embolus origin. In the *horni* group the embolar base is larger with a low ridge distally and lacks an indented area proximal to this. A swollen, well-developed median apophysis is somewhat removed from the embolus origin. The embolus itself begins on the retrolateral side. The membranous conductor rises pro-distal from the embolar base in the *regina* group but proximally in the *horni* group.

Distribution (Fig. 11)

Although widespread, these spiders do not appear to be common. *P. regina* is known from the north-east coast of Queensland to southern New South Wales. While *P. horni* is found in arid areas across the centre of the continent, *P. tenuis* is found in the arid areas of Western Australia and western South Australia. *P. occidentalis* is known from semi-arid areas of southern Western Australia. One record of a female from the Flinders Ranges of South Australia is tentatively placed in that species (see later). *P. regina* has a distribution disjunct from the other species, while *P. tenuis* overlaps *P. horni* in the northern part of its range and *P. occidentalis* in Western Australia on the southern part of its range.

KEY TO THE AUSTRALIAN SPECIES OF *PEDIANA*

- 1 — Anterior tibiae usually with 1 dorsal spine and 2 ventral spine pairs. Male with embolus coiled 2½ times 2
 - Anterior tibiae usually with 2 dorsal spines and 3 ventral spine pairs. Male with embolus coiled 5 times 3
- 2 — Venter of abdomen with orange setae. Male embolar base with small median apophysis *regina* (L. Koch)
 - Venter of abdomen with yellow setae. Male embolar base with broad median apophysis *occidentalis* Hogg
- 3 — Anterior femora with white spots. Male with curved dorsal basal ridge on palpal tibial apophysis *horni* (Hogg)
 - Anterior femora with reddish spots. Male with straight-sided dorsal basal ridge on palpal tibial apophysis *tenuis* Hogg

The *Regina* Group

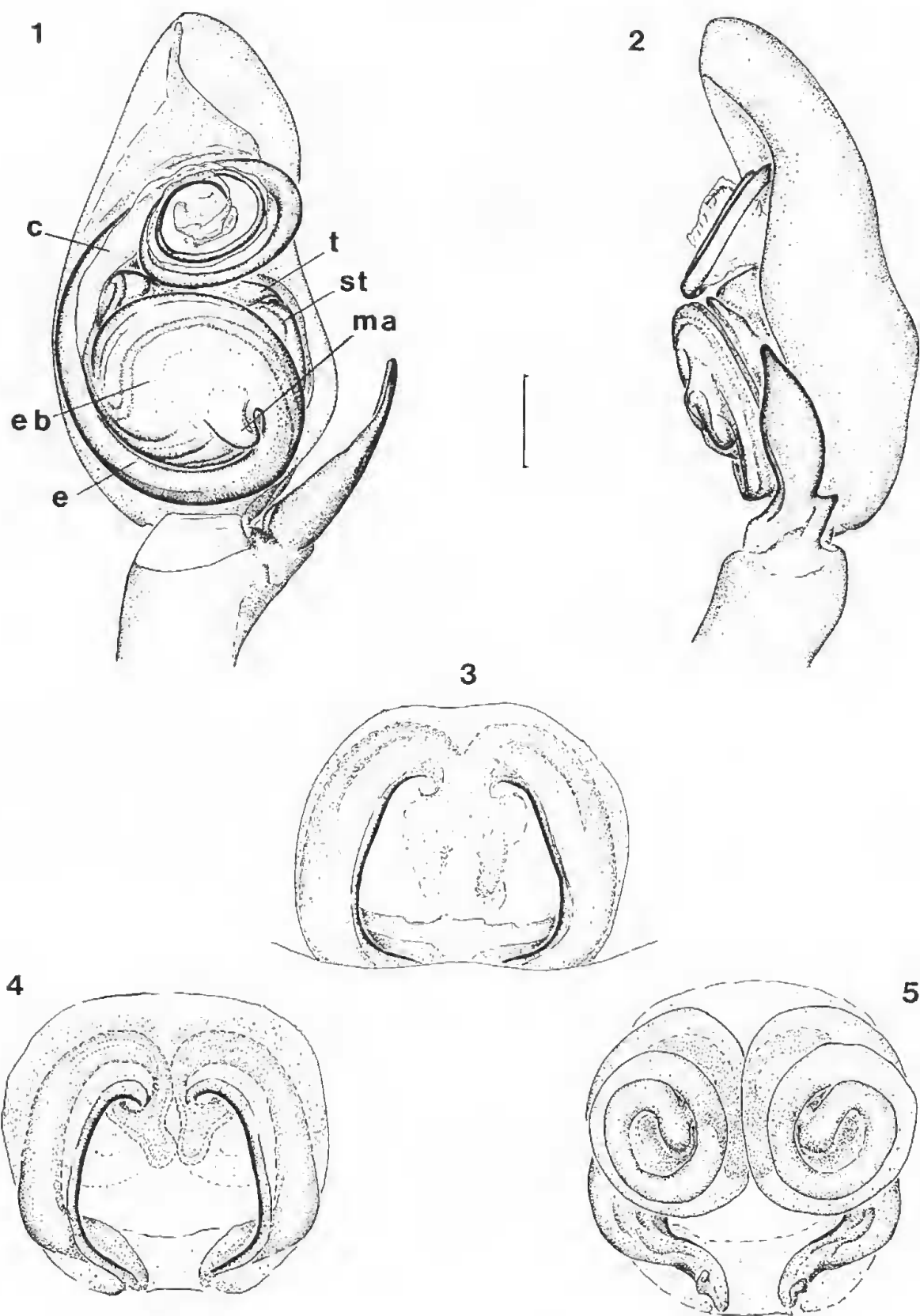
Comprises *P. regina*, *P. occidentalis* and Thorell's species from Yule Island. Males with about 2½ embolar coils, conductor beginning adjacent distal pro-margin of embolar base. Embolar base indented prolaterally, median apophysis small and adjacent origin of embolus. Portion of division between subtegulum and tegulum visible on retrolateral side when viewed ventrally. Females with large spermathecal sacs. Insemination ducts coiled 2–2½ times.

Pediana regina (L. Koch) (Figs 1–5, Table 1)

Heteropoda regina L. Koch, 1875: 716. One of two known syntype females from Peak Downs, Queensland, 22°56'S, 148°05'E, ZMH (Mus. Godeffroy Nr 14602), examined. L. Koch (1875) mentions material from Bowen, Peak Downs and

TABLE 1. Leg measurements of *Pediana regina* (L. Koch) syntype female with male QM S7196 in parentheses.

| Leg | Femur | Patella | Tibia | Metatarsus | Tarsus | Total |
|-----|------------|-----------|------------|------------|-----------|-------------|
| I | 8.4 (9.7) | 3.6 (3.2) | 7.1 (9.5) | 7.2 (9.2) | 2.3 (2.3) | 28.6 (32.9) |
| II | 8.8 (10.1) | 3.6 (3.2) | 7.5 (10.0) | 7.3 (9.3) | 2.2 (2.3) | 29.4 (34.9) |
| III | 6.7 (7.2) | 2.8 (2.2) | 5.5 (6.5) | 5.1 (5.9) | 1.9 (1.8) | 22.0 (23.6) |
| IV | 8.0 (9.0) | 2.8 (2.2) | 6.4 (8.3) | 6.9 (9.0) | 2.0 (2.1) | 26.1 (30.6) |
| Pa | 2.8 (2.4) | 1.4 (1.0) | 1.7 (1.0) | — — | 3.1 (2.8) | 9.0 (7.2) |



FIGURES 1-5. *Pediana regina* (L. Koch). 1 & 2, left palpal tibia and tarsus of male QM S7196: 1, ventral; 2, retrolateral. 3, epigynum of syntype female. 4 & 5, vulva of SAMA N1988471: 4, ventral; 5, dorsal. Scale line 0.5 mm. c, conductor; e, embolus; eb, embolar base; ma, median apophysis; st, subtegulum; t, tegulum.

Cape York without stating the number of specimens. One female in NMV (K-0873) examined, with the same number (14602) as the syntype above, but with no other data, is a possible syntype. A female from Bowen (not examined) is in the BMNH. The Cape York material, deposited in the Bradley Collection, may have found its way to MUZ (Wrocław) in which case, was probably lost during World War II or possibly is in the Macleay Museum, Sydney, but has not yet been found.

Pediana regina Simon, 1880: 258.

Diagnosis

Anterior femora blackish with white spots, orange-yellow venter of abdomen. Females with broad, triangular-shaped fossa. Male palp with broad tibial apophysis, bulb with small median apophysis.

Syntype female

CL 7.9, CW 7.4, AL 13.2, AW 9.2.

Colour in alcohol: In addition to that under 'Remarks', carapace with orange and white setae, white setae grouped on anterior lateral corner of carapace and on basal half of chelicerae, particularly below boss. Anterior femora ventrally blackish with clumps of white setae. Abdomen yellow-brown laterally with orange spots towards venter. Ventrally with orange setae. May have short transverse mark of brown setae between epigynum and pedicel.

Eyes: AME diameter 0.58, AME:ALE:PME:PLE = 1:1.17:0.83:0.86. Interspaces: AME-AME 0.30, AME-ALE 0.10, PME-PME 1.20, PME-PLE 1.14, AME-PME 1.52, ALE-PLE 1.20. MOQ, anterior width: posterior width: length = 2.62:2.84:3.17. Clypeus half width of AME. Chelicerae: Retromargin of right chelicera with 4 teeth, 5 on left. Labium: L 1.2, W 1.5. Sternum: L 3.9, W 3.5.

Legs (Table 1): Anterior leg ratios = (leg I) 3.6, (leg II) 3.7. Fossa broad posteriorly. Vulva (of SAMA N1988471) with insemination ducts coiled about 2½ times.

Male QM S7196

CL 5.7, CW 5.3, AL 7.0, AW 3.8.

Colour in alcohol: Yellow setae somewhat clustered on anterior half and laterals of carapace. Median cluster of yellow setae on basal half of chelicerae, whitish laterally. Sternum orange-brown suffused with black.

Eyes: AME diameter 0.41, AME:ALE:PME:PLE = 1:1.07:0.85:0.90. Interspaces: AME-AME 0.39, AME-ALE 0.10, PME-PME 1.17, PME-PLE 1.12, AME-PME 1.56, ALE-PLE 1.07. MOQ, anterior width: posterior width: length = 2.00:2.83:3.41. Clypeus equals width of AME.

Chelicerae: Retrolateral teeth 5. Labium: L 0.9, W 1.0. Sternum: L 2.8, W 2.6.

Legs (Table 1): Anterior leg ratios = (I) 5.8, (II) 6.1. Tibial index (leg I) = 7.6.

Palp: Embolus with 2½ coils.

Variation

Carapace length of females range from 5.0–8.5 (n = 23, mean = 6.7). Males: 3.5–6.0 (n = 9, mean = 5.2). Tibial index of Leg I of males: 6.7–9.1 (n = 9, mean = 7.9). Most often with 4 retrolateral cheliceral teeth.

Comments

Thorell's *Polydarnina regina* material of one male and a penultimate female from Yule Island, differs from *regina* in its larger size, blackish caput, and less patterned abdomen with yellowish venter. Leg proportions and spination resemble the *horni* group. The male further differs in the apex of the dorsal ridge on the palp tibial apophysis resembling that of *P. horni* (Figs 12–13).

Other material examined

Queensland: 1 ♀, Bell, Darling Downs, 26° 56' S, 151° 27' E, QM S7188; 2 ♂♂, Black Duck Creek, 27° 54' S, 152° 13' E, QM S7214; 1 ♀, Black Mountain, 71° 54' S, 145° 14' E, QM S7191; 1 ♀, Black Mountain, Kuranda area, AM KS20195; 1 ♀, Byfield, 22° 50' S, 150° 38' E, AM KS19724; 1 juv. Calamvale, 27° 37' S, 153° 02' E, QM S7187; 1 ♀, Camira, Brisbane, QM S6563; 1 ♂, Cooloola, 26° 12' S, 153° 05' E, QM S7196; 1 juv. Enfield Station, 27° 06' S, 151° 02' E, QM S7202; 1 ♀, Fanning River Stn, 19° 44' S, 146° 26' E, AM KS19669; 1 ♂, same data, AM KS20203; 1 ♀, Gin Gin, 25° 00' S, 151° 57' E, SAMA N1988471; 1 ♂, Gracemere, 23° 26' S, 150° 27' E, AM KS16650; 1 ♀, Ipswich, 27° 37' S, 152° 47' E, QM S7197; 1 ♀, Koah, 16° 49' S, 145° 31' E, AM KS20196; 1 ♂, Lake Broadwater, 27° 21' S, 151° 06' E, QM S7185; 2 ♀♀, Lake Nuga Nuga, 25° 01' S, 148° 42' E, QM S7215; 1 ♂, Marlaybrook, 26° 54' S, 151° 36' E, QM S7186; 1 ♀, Miriam Vale, 24° 20' S, 151° 34' E, AM KS20197; 1 juv., Mt Coot-tha, 27° 28' S, 152° 58' E, QM S7200; 1 ♂, same locality, QM S7217; 1 ♂, Mt Molloy, 16° 41' S, 145° 20' E, QM S7192; 1 ♂, Mt Nebo, Brisbane, QM S7189; 1 ♂, Nankin Creek, Rockhampton, 23° 24' S, 150° 39' E, AM KS19730; 1 ♂, North Booval, 25° 12' S, 152° 02' E, QM S7216; 1 ♀, Peach Creek, 13° 41' S, 143° 09' E, QM S7193; 1 ♀, Proserpine, 20° 24' S, 148° 35' E, QM S7184; 1 ♂, Rockdale, Brisbane, QM S7190; 1 ♂, same locality, QM S7201; 2 juv. same locality, QM S7203; 1 ♀, Rundle Range, 23° 40' S, 151° 00' E, QM S7199; 1 ♀, The Fork-Mt Moffat area, 25° 04' S, 148° 03' E, QM S6862; 1 ♀, Wynnum, 27° 27' S, 153° 10' E, QM S7194; 1 ♀, Yeppoon, 23° 08' S, 150° 44' E, QM

S7198. New South Wales: 1 ♀, Cessnock, 32°50'S, 151°21'E, AM KS20199; 1 ♀, Jenolan Caves, 33°49'S, 150°02'E, AM KS20193; 1 ♂, 1 ♀, Pittwater, Sydney, AM KS20198; 1 ♀, Sydney, 33°53'S, 151°13'E, AM KS20192; 1 ♀, West Pymble, Sydney, AM KS20194.

***Pediana occidentalis* Hogg**

(Figs 6–10, Table 2)

Pediana occidentalis Hogg, 1903 : 461. Two syntype females, Perth, Western Australia, 31°57'S, 115°51'E, H.W.J. Turner. Pinned specimens in alcohol, BMNH, 1893.7.4.47–100 part, examined.

Diagnosis

From *regina*; femora without black ventrally, abdomen yellowish ventrally. Males with relatively shorter, thicker legs, broader median apophysis and narrower palp tibial apophysis.

Syntype female (largest)

CL 6.6, CW 6.0, AL 8.5, AW 6.0.

Colour in alcohol; Anterior femora reddish-yellow suffused with black but not as darkly as in *regina*. More white setae on carapace. Abdomen yellowish ventrally.

Eyes: AME diameter 0.45, AME:ALE:PME:PLE = 1:1.33:1.00:1.11, Interspaces; AME-AME 0.48, AME-ALE 0.20, PME-PME 1.24, PME-PLE 1.38, AME-PME 1.69, ALE-PLE 1.33, MOQ, anterior width: posterior width: length = 2.44:3.16:3.33. Clypeus equals $\frac{2}{3}$ width of AME. Chelicerae: Retromarginal teeth 3. Labium: L 0.9, W 1.3. Sternum: L 3.3, W 2.8.

Legs (Table 2): Anterior leg ratio = 3.8. Fossa broad posteriorly but relatively narrower than in *regina*. Vulva (of WAM 88/945) with insemination ducts coiled 2–2½ times. Spermathecal sacs may be relatively larger than in *regina*.

Male WAM 88/940

CL 5.8, CW 4.7, AL 5.5, AW 3.3.

Colour in alcohol: With more white setae on lateral edges of carapace and chelicerae. Anterior femora lightly suffused with black, less conspicuous white spots.

Eyes: AME diameter 0.35, AME:ALE:PME:PLE = 1:1.20:0.91:1.09, Interspaces; AME-AME 0.46, AME-PLE 0.06, PME-PME 1.20, PME-PLE 1.14, AME-PME 1.89, ALE-PLE 1.14, MOQ, anterior width: posterior width: length = 2.46:3.03:3.26. Clypeus equals $\frac{3}{4}$ width of AME.

Chelicerae: Left chelicera with 3 retrolateral teeth, 4 on right. Labium: L 0.7, W 0.9. Sternum: L 2.6, W 2.4.

Legs (Table 2): Anterior leg ratios = (I) 4.6, (II) 4.7, Tibial index (leg I) = 9.1.

Palp: Embolus with 2½ coils. Median apophysis broader than in *regina*, tibial apophysis narrower.

Variation

Carapace length of females range from 5.8–6.6 (n = 4, mean = 6.3). Males: 4.6–5.3 (n = 3, mean = 4.9). Tibial index of leg I of males: 9.3–10.6 (n = 3, mean = 9.7). Often with 4 retrolateral cheliceral teeth.

Comments

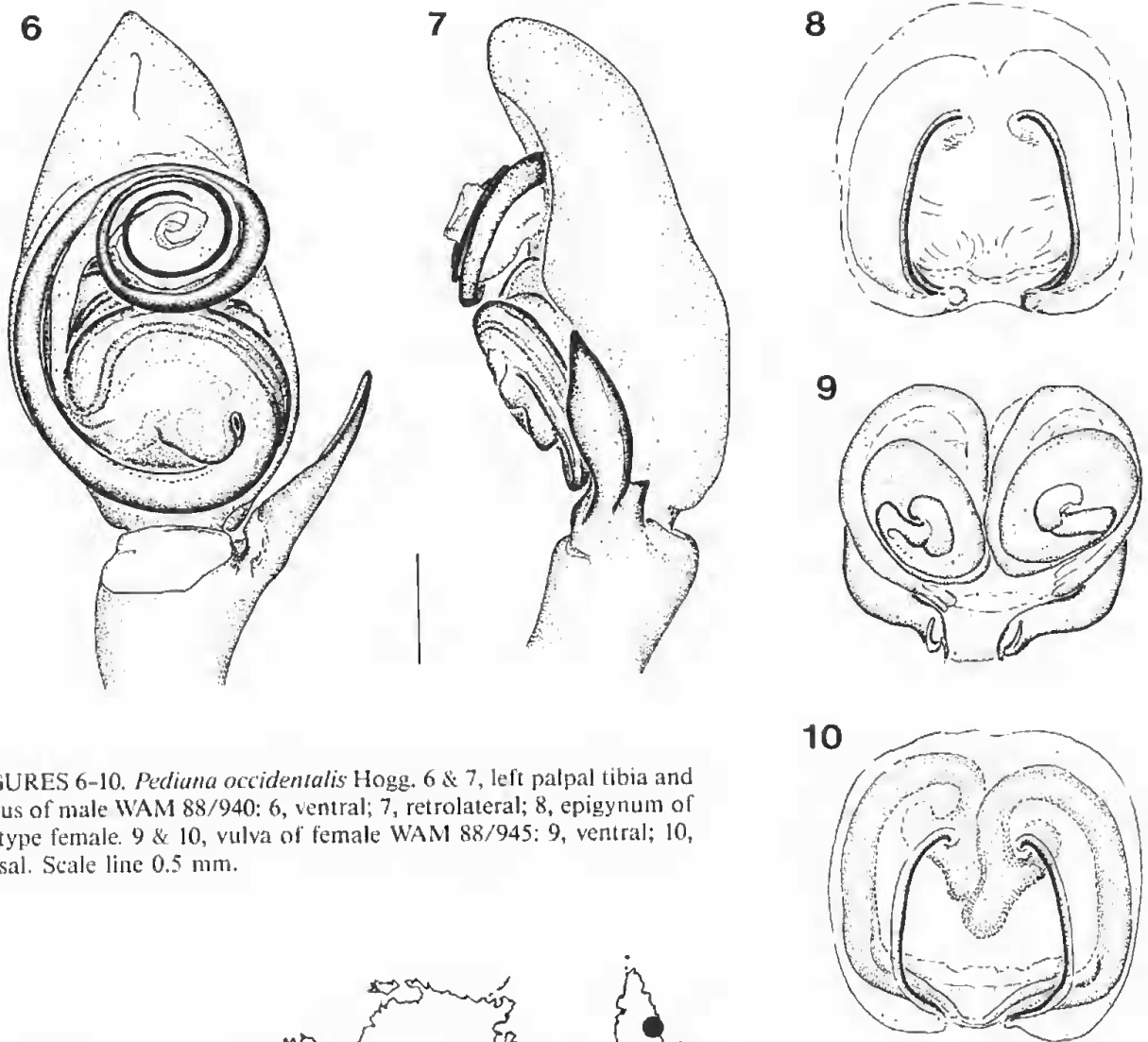
A female from the Flinders Ranges in South Australia is tentatively included in this species although the differences in the epigynum and vulva shape (narrower posteriorly than *occidentalis* with insemination ducts positioned more anteriorly) are comparable with that of *regina* and *occidentalis*. Clarification of this specimen's affinities will remain uncertain until male specimens from the region become available.

Other material examined

Western Australia: 1 ♂, Darlington, 31°55'S, 116°04'E, WAM 88/940; 1 ♂, Goongarrie, 29°55'S, 121°15'E, WAM 88/942; 1 ♀, Mt Pleasant, 33°49'S, 115°50'E, WAM 88/944; 1 ♂,

TABLE 2. Leg measurements of *Pediana occidentalis* Hogg, syntype female (largest) with male WAM 88/940 in parentheses.

| Leg | Femur | Patella | Tibia | Metatarsus | Tarsus | Total |
|-----|-----------|-----------|-----------|------------|-----------|-------------|
| I | 7.5 (7.9) | 3.2 (2.7) | 6.3 (7.2) | 6.2 (7.1) | 1.9 (1.9) | 25.1 (26.8) |
| II | 7.5 (8.2) | 3.2 (2.7) | 6.3 (7.6) | 6.2 (7.1) | 1.9 (1.9) | 25.1 (27.5) |
| III | 6.0 (6.2) | 2.5 (2.1) | 5.0 (5.5) | 4.4 (5.0) | 1.4 (1.5) | 19.3 (20.3) |
| IV | 7.4 (7.8) | 2.5 (2.2) | 5.8 (6.5) | 6.1 (7.4) | 1.6 (1.8) | 23.4 (25.7) |
| Pa | 2.2 (2.1) | 1.1 (0.9) | 1.5 (1.0) | — | 2.7 (2.5) | 7.5 (4.5) |



FIGURES 6-10. *Pediana occidentalis* Hogg. 6 & 7, left palpal tibia and tarsus of male WAM 88/940: 6, ventral; 7, retrolateral; 8, epigynum of syntype female. 9 & 10, vulva of female WAM 88/945: 9, ventral; 10, dorsal. Scale line 0.5 mm.

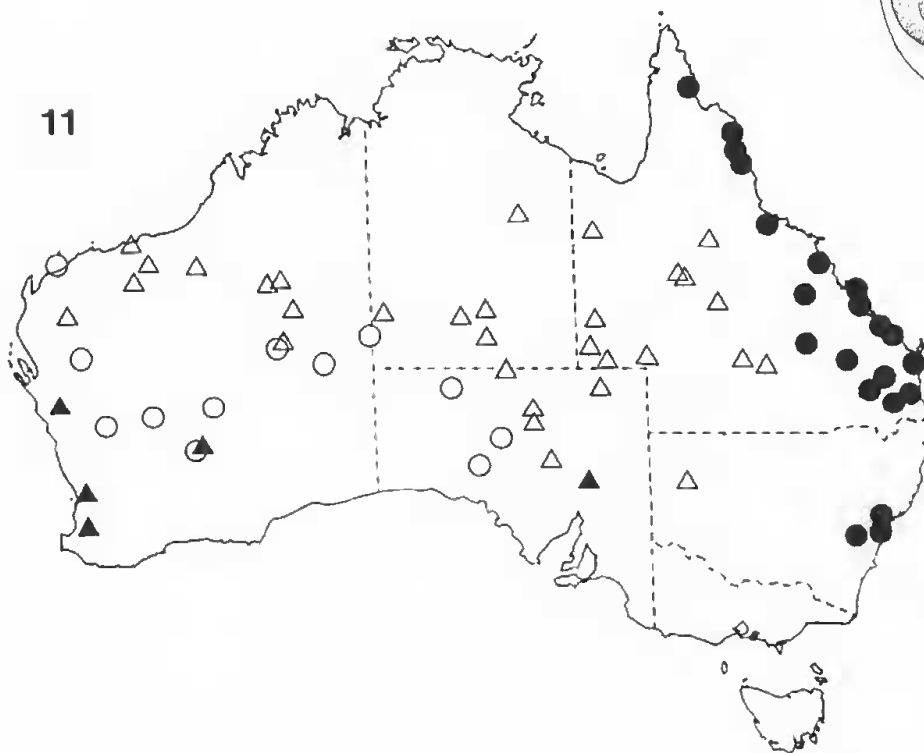
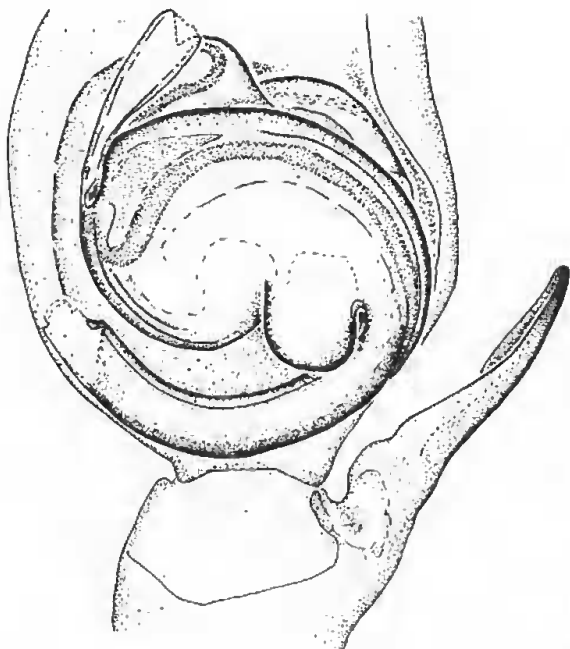
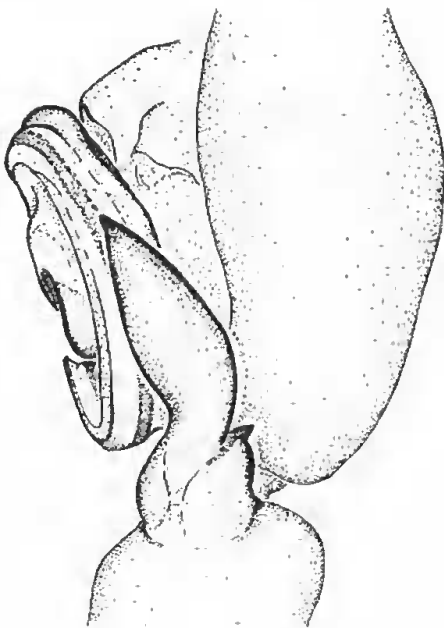


FIGURE 11. Distribution of *Pediana* in Australia: ● *Pediana regina* (L. Koch); ▲ *P. occidentalis* Hogg; ○ *P. horni* (Hogg); Δ *P. tenuis* Hogg.

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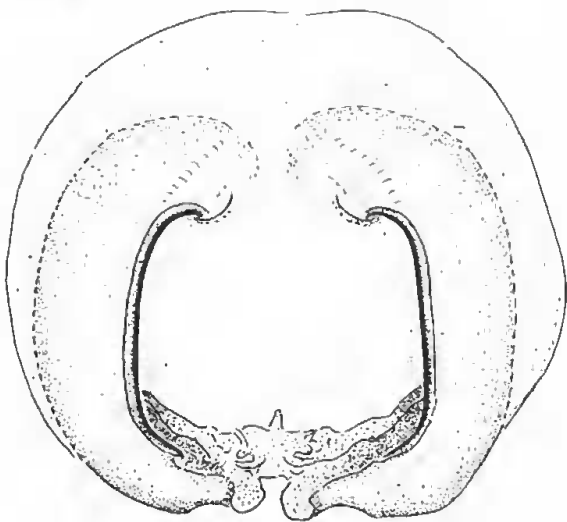


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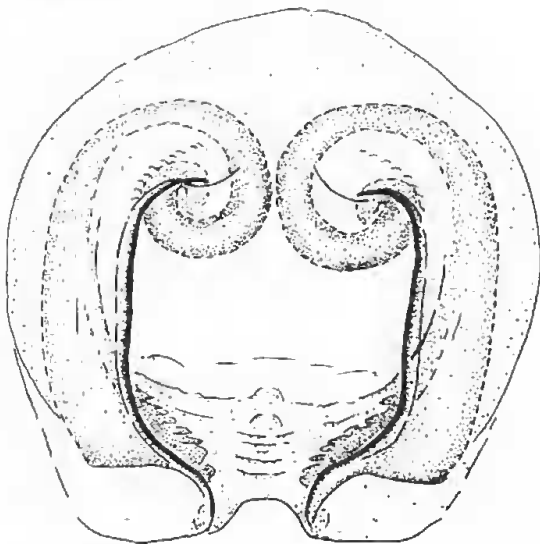


FIGURES 12 & 13. '*Polydamna regina*' Thorell. Left palpal tibia and tarsus of syntype male: 12, ventral; 13, retrolateral. (Distal part of embolus missing.) Scale line 0.5 mm.

14



15



FIGURES 14 & 15. *Pediana horni* (Hogg). 14, epigynum of syntype female, BM(NH); 15, vulva of female SAMA N1988462, ventral. Scale line 0.5 mm.

Murchison River, ca 27°31'S, 115°43'E, BYM 1962/A22; 1 ♀, Nedlands, 31°59'S, 115°48'E, WAM 88/945; 1 ♀, Walyunga, ca 31°50'S, 116°10'E, AM KS14975. South Australia; 1 ♀, Wilpena Pound, 31°30'S, 139°19'E, SAMA N1988472.

The *Horni* Group

Comprising *P. horni* and *P. tenuis*, this group is characterised in having more numerous long setae (ca 1.5) ventrally on leg four, males with about 5 embolar coils, conductor beginning in the proximal area of the embolar base, embolar base convex prolaterally, median apophysis large and slightly removed from origin of embolus. Females lack spermathecal sacs. Insemination ducts with 5 coils.

Pediana horni (Hogg) (Figs 14–18, Table 3)

Isopeda horni Hogg, 1896: 340. Two syntype females, Oodnadatta, South Australia, 27°33'S, 135°27'E, Horn Expedition, BMNH. 1871.1.18.2 and NMV K-0872, examined.

Pediana horni: Hogg, 1903: 462.

Diagnosis

Anterior femora with conspicuous white spots ventrally, male with curved apical point on dorsal ridge of palp tibial apophysis.

Syntype female BMNH

CL 9.8, CW 9.3, AL 19.5, AW 13.0.

Colour in alcohol: As in Hogg (1903) and above. Eyes: AME diameter 0.64, AME:ALE:PME:PLE = 1:1.16:0.86:0.97. Interspaces; AME-AME 0.47, AME-ALE 0.16, PME-PME 1.09, PME-PLE 1.41, AME-PME 1.47, ALE-PLE 1.19. MOQ, anterior width: posterior width: length = 2.34:2.75:3.03. Clypeus width more than ½ AME. Chelicerae:

Retrolateral teeth 3. Labium: L 1.5, W 1.9. Sternum: L 4.8, W 4.2.

Legs (Table 3): Anterior leg ratio = 3.5.

Fossa with somewhat parallel lateral sides.

Male SAMA N1988458

CL 9.2, W 8.3, AL 9.7, AW 6.0.

Eyes: AME diameter 0.6. AME:ALE:PME:PLE = 1:1.07:0.83:0.93. Interspaces; AME-AME 0.33, AME-ALE 0.13, PME-PME 1.17, PME-PLE 1.27, AME-PME 1.49, ALE-PLE 1.17. MOQ, anterior width: posterior width: length = 2.33:2.83:3.17. Clypeus width ¾ of AME. Chelicerae: Retrolateral teeth 3. Labium: L 1.4, W 1.6. Sternum: L 4.2, W 3.5.

Legs (Table 3): Anterior leg ratio = 4.5. Tibial index (leg I) = 10.3.

Palps: Tibial apophysis with curved apical point on basal ridge. Embolus with 5 coils.

Variation

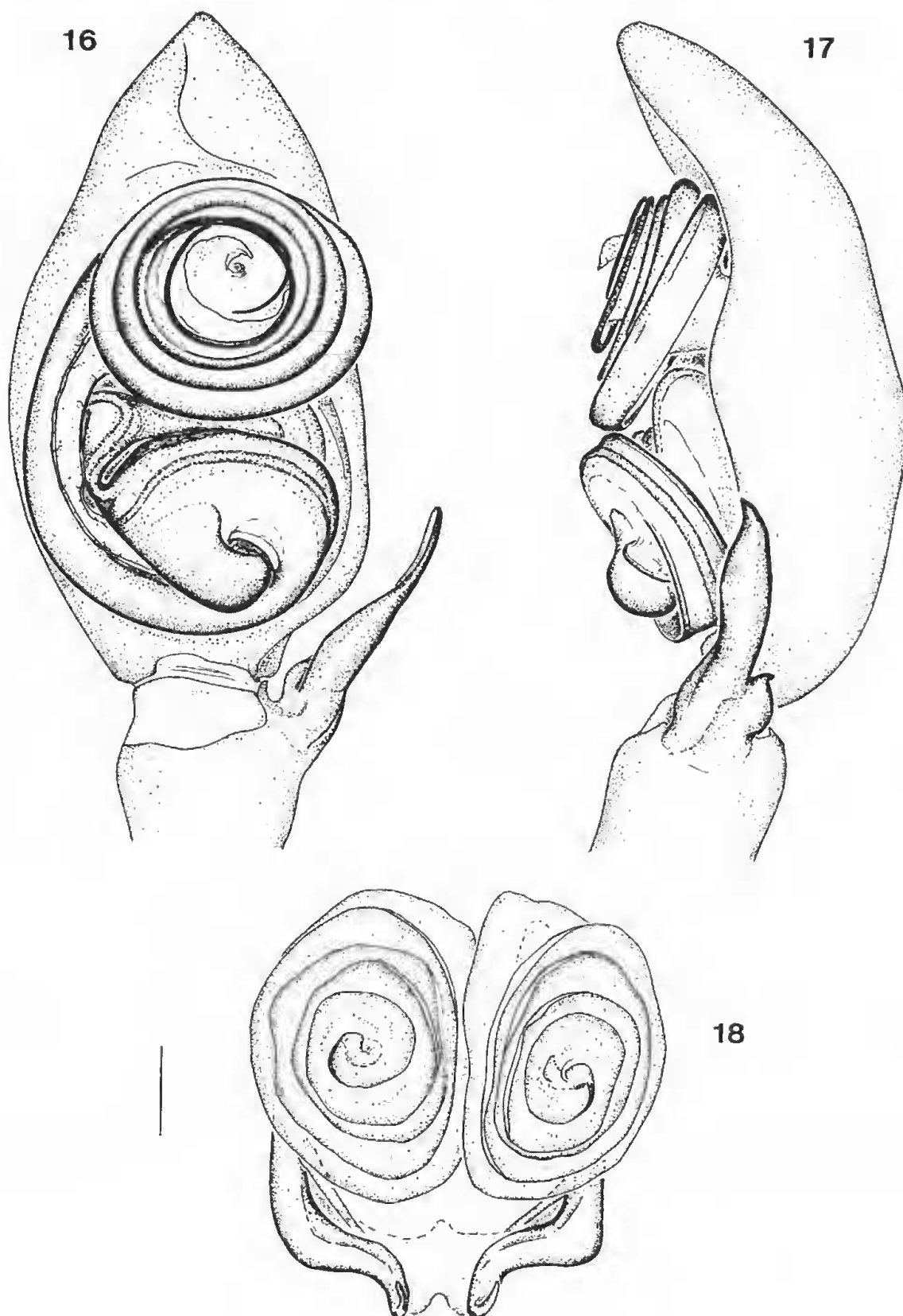
Carapace lengths of females range from 6.1–12.5 (n = 23, mean = 9.5). Males; 6.9–9.8 (n = 5, mean = 8.3). Tibial index of leg I of males; 8.4–10.6 (n = 5, mean = 9.5). A vivid black streak is sometimes present dorsally on the abdomen. Fossa may be slightly wider or narrower posteriorly. Two of four females examined from Ambathala, Queensland, are smallish with decidedly elongated abdomens and relatively smaller epigyne but there is no justification for removing them to another taxa.

Other material examined

South Australia: 1 ♂, Clifton Hills, 27°03'S, 138°59'E, SAMA N1988458; 1 ♀, Finke River, 40 km from Abminga, ca 26°03'S, 135°53'E, AM KS20191; 1 juv. Olympic Dam, 30°27'S, 136°53'E, SAMA N1988463; 1 ♀, The Peake-Mt Denison area, 28°09'S, 135°57'E, SAMA N1988461; 1 ♀, Road to Oodnadatta, 28°35'S, 135°53'E, SAMA N1988462. **Western Australia:** 2 juv. Canning Stock Route, 22°32'S, 124°24'E, WAM 88/1483-4; 1 juv.

TABLE 3. Leg measurements of *Pediana horni* (Hogg) syntype female BM(NH), with male SAM N1988458 in parentheses.

| Leg | Femur | Patella | Tibia | Metatarsus | Tarsus | Total |
|-----|-------------|-----------|------------|------------|-----------|-------------|
| I | 10.3 (12.0) | 4.6 (4.6) | 8.3 (11.0) | 8.3 (10.9) | 2.5 (2.9) | 34.0 (41.4) |
| II | 10.3 (12.0) | 4.5 (4.5) | 8.4 (11.1) | 8.3 (10.9) | — (2.9) | — (41.4) |
| III | 7.7 (9.0) | 3.7 (3.6) | 6.3 (7.9) | 5.4 (7.1) | 2.2 (2.2) | 25.3 (29.8) |
| IV | 9.8 (11.7) | 3.5 (3.5) | 7.5 (9.7) | 8.3 (10.8) | — (2.5) | — (38.2) |
| Pa | 3.6 (3.5) | 1.8 (1.4) | 2.2 (1.6) | — — | 3.4 (4.0) | 11.0 (10.5) |



FIGURES 16-18. *Pediana horni* (Hogg). 16 & 17, right palpal tibia and tarsus of male SAMA N1988458 (reversed drawing): 16, ventral; 17, retrolateral. 18, vulva of female SAMA N1988462, dorsal. Scale line 0.5 mm.

same locality but 22°20'S, 124°45'E, WAM 88/1485; 1 ♀, Lower Carawine Gorge, 21°29'S, 121°02'E, WAM 88/1485; 1 ♀, Mundabullagana Station, 20°31'S, 118°04'E, SAMA N1988468; 1 ♀, Windy Corner, 23°34'S, 125°12'E, WAM 88/2905; 1 ♀, Wittenoom, 22°14'S, 118°20'E, WAM 88/1493; 1 ♀, Woodstock Station, 21°37'S, 118°57'E, WAM 88/2133; 1 ♀, same locality but 21°36' 34"S, 118°58' 28"E, WAM 88/2533; 1 ♂, same locality but 21°36' 40"S, 119°02' 23"E, WAM 88/2132; 1 ♂, same locality, WAM 88/2133. **Northern Territory:** 1 ♀, Alice Springs, 23°42'S, 133°52'E, NTM A52; 1 ♀, Frewena Road House, 19°25'S, 135°24'E, NTM; 1 ♀, Hermannsburg, 23°57'S, 132°46'E, SAMA N1988465; 1 ♂, Idracowra Station, 25°00'S, 133°47'E, SAMA N1988464; 1 ♀, Ligertwood Cliffs, 23°39'S, 129°30'E, WAM 88/1494. **Queensland:** 1 ♀, Ambathala, 25°58'S, 145°19'E, QM S7174; 1 ♀, same locality, QM S7176; 1 ♀, same locality, QM S7219; 1 ♀, same locality, QM S7220; 2 ♀♀, Betoota (45 km E of), ca 25°45'S, 141°10'E, QM S7183; Eggsac and first instars, same locality, QM S7218; 1 ♂, Charleville, 26°24'S, 146°15'E, QM S7221; 1 ♀, Dunraven Station, 20°28'S, 143°57'E, QM S7180; 1 ♀, Lake Munoonie, 25°12'S, 138°40'E, QM S7182; 2 juv. same locality, QM S7178; 1 juv. same locality, QM S7181; 1 ♀, Longreach, 23°27'S, 144°15'E, QM S7179; 1 ♀, Montara Bore, Sandringham Stn, 23°56'S, 138°47'E, AM KS15282; 1 ♀, Mt Munro, 22°13' 50''S, 142°28' 50 ''E, QM S7175; 1 ♀, Split Rock, Camooweal, 19°54'S, 138°39'E, AM KS20200; 1 ♀, Winton, 22°23'S, 143°02'E, QM S7177. **New South Wales:** 2 ♀♀, Springs Creek, 31°43'S, 142°41'E, SAMA N1988466-7.

***Pediana tenuis* Hogg**
(Figs 19-22, Table 4)

Pediana tenuis Hogg, 1903: 462. Simon, 1908: 441. Holotype female, dried specimen, Western Australia [BMNH] lost.

Diagnosis

P. tenuis can be distinguished from *P. horni* by the presence of reddish setae in place of white on the anterior femora pro-ventrally. Males with relatively longer, thinner legs and straight-edged, triangular-shaped apex on dorsal basal ridge of palp tibial apophysis.

Female WAM 88/958

CL 8.5, CW 7.4, AL 16.9, AW 9.5.

Colour in alcohol: Similar to *P. horni* but carapace dark red-brown with more white than yellow setae. Black setae may be more numerous. Dark blackish-brown setae on sternum. Coxae orange-brown, prolaterally black-brown. Legs reddish-brown, dark brown-black patches. Femora retro-dorsally blackish occasionally forming a dark stripe. Clumps of reddish setae pro-ventrally on anterior pairs, whitish setae in clumps on posterior pairs. Abdomen green-grey with a black median streak and black spots formed of setae. Ventrally with orange setae.

Eyes: AME diameter 0.54, AME:ALE:PME:PLE = 1: 1.33: 0.93: 1.04. Interspaces: AME-AME 0.41, AME-ALE 0.15, PME-PME 1.11, PME-PLE 1.48, AME-PME 1.55, ALE-PLE 1.30. MOQ, anterior width: posterior width: length = 2.41: 2.91: 3.15. Clypeus more than half diameter of AME. Chelicerae: Retrolateral teeth 3. Labium: L 1.3, W 1.6, Sternum: L 3.9, W 3.3.

Legs (Table 3): Anterior leg ratio = 3.7.

Epigynum similar to *horni* but fossa relatively narrower posteriorly.

Male WAM 88/957

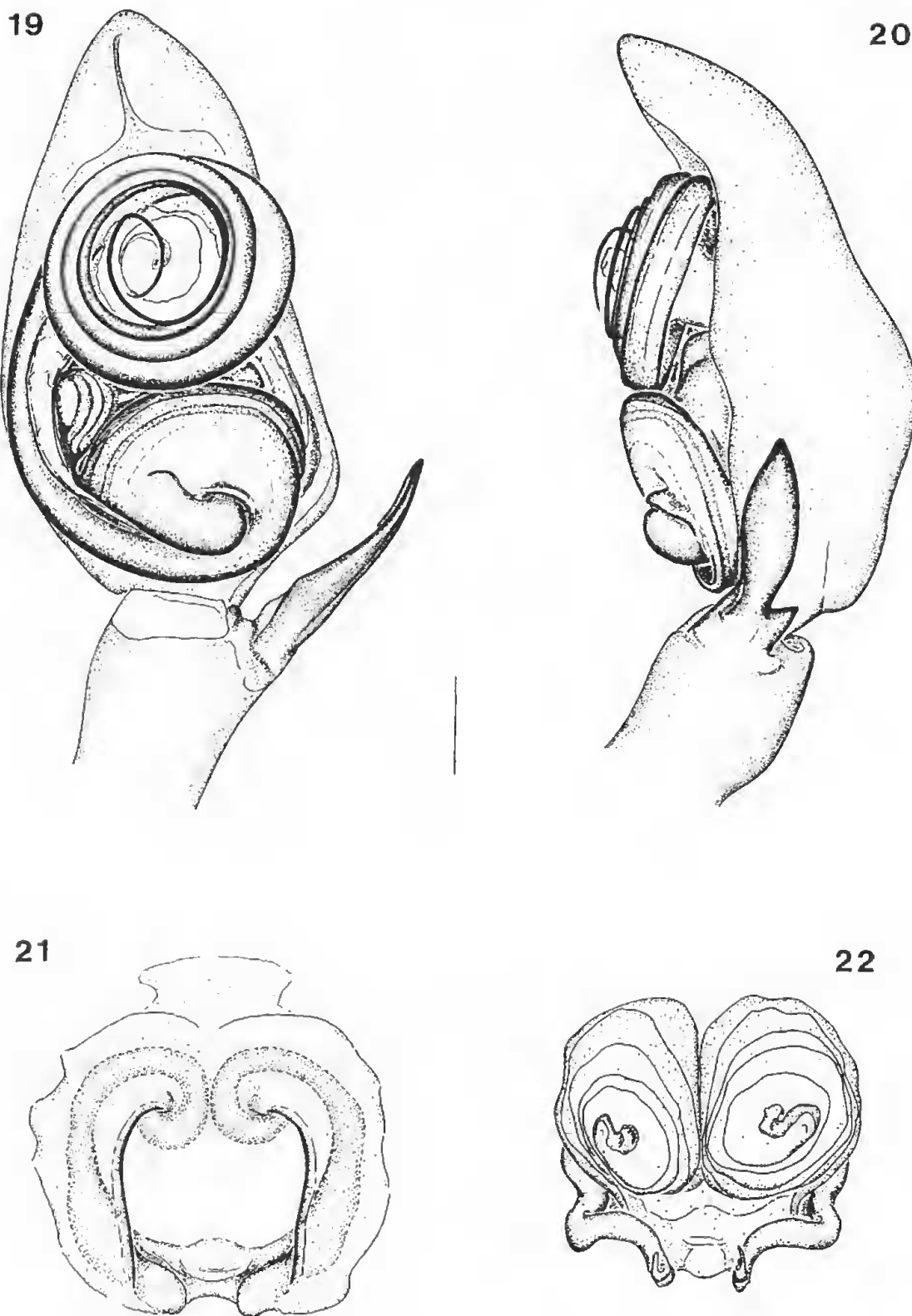
CL 7.3, CW 6.5, AL 9.0, AW 4.5.

Colour in alcohol: Paler than female. Venter of abdomen with smaller faint brown patches behind epigastric furrow and anterior to spinnerets.

Eyes: AME diameter 0.50, AME:ALE:PME:PLE = 1:1.24:0.90:1.00. Interspaces: AME-AME 0.24, AME-ALE 0.04, PME-PME 0.96, PME-PLE 1.24, AME-PME 1.56, ALE-PLE 1.00. MOQ, anterior width: posterior width: length = 2.24: 2.76: 3.20.

TABLE 4. Leg measurements of *Pediana tenuis* Hogg, female WAM 88/958 with male WAM 88/957 in parentheses.

| Leg | Femur | Patella | Tibia | Metatarsus | Tarsus | Total |
|-----|------------|-----------|------------|------------|-----------|-------------|
| I | 9.4 (12.9) | 3.9 (4.2) | 7.8 (12.1) | 8.1 (12.6) | 2.2 (2.9) | 31.4 (44.7) |
| II | 9.5 (12.9) | 3.8 (4.2) | 7.9 (12.0) | 8.0 (12.7) | 2.2 (2.9) | 31.4 (44.7) |
| III | 7.0 (9.1) | 3.1 (3.0) | 5.8 (7.9) | 5.0 (7.3) | 1.9 (2.1) | 22.8 (29.4) |
| IV | 9.2 (12.1) | 3.1 (3.0) | 7.0 (10.0) | 7.8 (11.9) | 2.2 (2.6) | 29.3 (39.6) |
| Pa | 3.1 (3.1) | 1.6 (1.3) | 1.8 (1.5) | — — | 3.1 (3.3) | 9.6 (9.2) |



FIGURES 19-22. *Pediana tenuis* Hogg. 19 & 20, left palpal tibia and tarsus of male WAM 88/957: 19, ventral; 20, retrolateral. 21 & 22, vulva of female WAM 88/958: 21, ventral; 22, dorsal. Scale line 0.5 mm.

Clypeus half width of AME. Chelicerae: Retrolateral teeth 3. Labium: L 1.1, W 1.2. Sternum: L 3.4, W 2.8.

Legs (Table 4): Anterior leg ratio = 6.1. Tibial index (leg I) = 7.4.

Palps: Triangular-shaped dorsal basal ridge on tibial apophysis. Embolus with 5 coils. Median apophysis smaller than in *horni*.

Variation

Carapace lengths of females range from 6.6–10.5 (n = 11, mean = 8.8). Males; 6.6–7.3 (n = 3, mean = 7.0). Tibial index of leg I of males; 7.4–9.2 (n = 3, mean = 9.7). Epigynum parallel-sided and, as in *horni*, often slightly wider or narrower towards posterior but several specimens of *tenuis* examined are considerably narrower posteriorly (Fig. 21).

Comments

As this species is recognisable from Hogg's description, designation of a neotype is unnecessary.

Material examined

Western Australia: 1 ♂, Banjiwarn, 27°48'05"S, 121°40'05"E, WAM 88/957; 1 P♂, Charles Knob, 25°03'S, 124°59'E, WAM 88/1486; 1 ♀, Coordevandy, 25°36'S, 115°58'E, WAM 88/1487; 1 ♀, Gill Pinnacle, 24°54'S, 128°46'E, SAMA N1988469; 1 ♀, Goongarrie, 29°55'25"S, 121°14'35"E, WAM 88/958; 1 ♀, Lyndon Station, 23°38'S, 15°14'E, WAM 88/1488; 1 ♀, Messengers Patch, 28°41'S, 116°57'E, WAM 88/1489; 2 ♂♂, Thevenard Island, 21°28'S, 114°59'E, WAM 88/2012-3; 1 ♀, Warburton Ranges, 26°06'S, 126°39'E, WAM 88/1490; 1 ♀, same locality, SAMA N1988470; 2 juv. same locality but N.W. of, 25°10'S, 124°40'E, WAM 88/1491-2; 1 ♀, Yuinmery, 28°32'00"S, 119°05'45"E, WAM

88/2110. **South Australia:** 1 ♀, Flat Rock Hole, Everard Ranges, 27°06'S, 132°26'E, SAMA N1985179; 1 ♀, Lake Phillipson, 29°28'S, 134°27'E, SAMA N1988460; 1 ♀, Wynbring, 30°34'S, 133°32'E, SAMA N1988459.

Subfamily placement

Pediana was originally placed by Simon (1897) in his Heteropodeae (= Heteropodinae) on the criteria of its longer than broad ocular quadrangle. Hogg (1903) included it in his Deleneae (= Deleninae) with other Australian genera based largely on male genitalia structure. Simon (1903) enlarged the Deleninae subfamily, including many more genera. Jarvi (1914) restricted the Deleninae again to Australian genera but Petrunkevitch (1928) included the subfamily in the Eusparassinae Jarvi, 1912. Gravelly (1931) recognised the Deleninae but also included genera from both Petrunkevitch's Eusparassinae and Micrommatinae (Jarvi 1912). Finally, Hirst (1989) restricted the genera of Deleninae to those originally included by Hogg, one of which was *Pediana*.

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